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EXAMINER	
ELLIOTT IV, BENJAMIN H	

ART UNIT	PAPER NUMBER
2474	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,109	BICHOT ET AL.	
	Examiner	Art Unit	
	BENJAMIN ELLIOTT	2474	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/04/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13 have been examined. Claim 5 has been previously canceled. Claims 1-4, 6-8, and 11-13 have been amended. Claims 1-4 and 6-13 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/04/2010 has been found to be in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Response to Arguments

3. Applicant's arguments with respect to claims 1-4 and 6-13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-4 and 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 7,079,508 B2 to Ayyagari et al (hereinafter "Ayyagari") in view of United States Patent Application Publication 2004/0032868 A1 to Oda et al (hereinafter "Oda").

Regarding Claim 1, Ayyagari discloses a method, computer-readable medium, and an access point (as directed to in the claims 1-29) for providing improved quality of service (QoS) over wireless links (Ayyagari: Col. 3, line 49 through Col. 4, line 25). Ayyagari discloses **a method for controlling Quality of Service (QoS) levels/service levels within a wired network associated with wireless Local Area Network (LAN)** (Ayyagari: Figure 1 and Col. 7, lines 13-19;

describing types of wired communication mediums. With description to Figure 1 and in accordance with a LAN and associated wireless LAN, see 171 and 198. Also, Col. 8, lines 19-37 describes LAN, wide-area networks (WAN), personal-area networks (PAN), and other networks that include communication protocols Bluetooth™, UPnP™, and JINT™. In Figure 2 and corresponding description in Col. 9, line 17 through Col. 10, line 11 for access point transmitting between wireless devices 210, 215, and 220 with wired router, 235.), **the wired network having different paths for carrying information frames received from at least one mobile terminal user** (Ayyagari: Figure 2 and corresponding description in Col. 9, line 17 through Col. 10, line 11; mobile devices 210, 215, and 220 are routed from access point, 200 to router, 235, and then further routed to servers, databases, or receiving node.), **comprising the steps of:**

receiving in the wired network at least one frame of information from the at least one mobile terminal user in said wireless LAN (Ayyagari: Figure 2 and Col. 9, lines 17-35; access point, 200 (connected to router, 235 consistent with the wired network) receives a request for access to a network from laptop computer, 215 (wireless device).);

determining a QoS level/service level for the received at least one information frame (Ayyagari: Col. 9, lines 28-35; the request (message) contains information that specifies the required QoS including bandwidth and time constraints.).

Although Ayyagari discloses requesting resources at each node along a path to accommodate a requested QoS (Ayyagari: Col. 4, line 53 through Col. 5,

line 18) and associating a tag with a particular QoS (Ayyagari: Col. 11, lines 4-19), Ayyagari does not expressly disclose associating a VLAN tag with a path that has a transmission capability to provide the determined QoS.

In a similar field, particular to Ayyagari with regards to optimum path selection (Ayyagari: Abstract; generally, the path is dictated at each individual node, whether a node can support the resources requested.), Oda discloses a LAN switch that recognizes an optimum path to a VLAN (Oda: [0031-0032]). Oda discloses **associating with the received at least one information frame an identifier that identifies at least one path through the wired network having a transmission capability sufficient to provide the determined QoS level/service level, wherein the identifier includes a Virtual Local Area Network (VLAN) number** (Oda: [0102-0108]); in a particular embodiment, a path monitor pings paths to determine shortest response time. The VLAN (path) with the shortest response time is determined to be the optimum path (Note: response times are synonymous with a QoS characteristic known as delay.). In [0263], Oda describes how the response time is then associated in “frame information” and then mapped to a VLAN ID to describe the optimum path.) **and routing the at least one information frame in the wired network along at least the at least one path identified by the associated identifier** (Oda: [0267]; the frame is transferred over the optimum VLAN and corresponding VLAN ID.).

Examiner has given the term “transmission capability” its broadest reasonable interpretation read in light of the specification to include any network device with the ability to route a frame of information in accordance with a VLAN

identifier. That is to say, if a switch has the “capability” to route frames of data according to a VLAN ID, it has sufficient transmission capability.

Since Ayyagari and Oda are of similar fields (path selection), it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Ayyagari to include the use of VLAN IDs for optimum path selection in the case where are there a plurality of networks. This beneficial to the method in that an optimum path may be assigned dynamically for individual frames if a fault or if a threshold of errors along a path is met or exceeded.

Regarding Claim 2, the combination of Ayyagari and Oda discloses **the method of claim 1**, wherein Ayyagari further discloses **the QoS level/service level is determined from the identity of the mobile terminal user that originated the at least one information frame** (Ayyagari: Col. 9, lines 36-39; QoS data structure includes the original requesting node.).

Regarding Claim 3, the combination of Ayyagari and Oda discloses **the method according to claim 1**, wherein Ayyagari further discloses **the QoS level/service level is determined in accordance with a QoS level/service level request received from the at least one mobile terminal user** (Ayyagari: Col. 9, lines 28-35; the request (message) contains information that specifies the required QoS including bandwidth and time constraints.).

Regarding Claim 4, the combination of Ayyagari and Oda discloses **the method according to claim 1**, wherein Oda further discloses **the step of receiving the at least one information frame comprises the step of**

receiving an IP packet in an Ethernet Frame (Oda: [0005-0028]; routing of Ethernet frames.).

Regarding Claim 6, the combination of Ayyagari and Oda discloses **the method according to claim 1**, wherein Ayyagari further discloses **the step of routing the at least one information frame comprises the step of routing the at least one information frame to one of a plurality of separate destinations** (Ayyagari: Figure 2 and Col. 9, lines 49-66; router, 235 routes frames to servers 245, 250, 255, 260 or to receiving node, 230.).

Regarding Claim 7, the combination of Ayyagari and Oda discloses **the method according to claim 1**, wherein Ayyagari further discloses **the step of routing the at least one information frame comprises the step of routing the at least one information frame to one destination across a selected one of a plurality of interfaces** (Ayyagari: Figure 2; router, 235 has at least two interfaces for routing.).

Regarding Claim 12, the combination of Ayyagari and Oda discloses **the method according to claim 1**, wherein Oda further discloses **the VLAN number is the identifier that identifies the path through the wired network having transmission capability sufficient to provide the determined QoS level/service level** (Oda: [0102-0108]); in a particular embodiment, a path monitor pings paths to determine shortest response time. The VLAN (path) with the shortest response time is determined to be the optimum path (Note: response times are synonymous with a QoS characteristic known as delay.). In [0263],

Oda describes how the response time is then associated in "frame information" and then mapped to a VLAN ID to describe the optimum path.).

Regarding Claim 8, Ayyagari discloses a method, computer-readable medium, and an access point (as directed to in the claims 1-29) for providing improved quality of service (QoS) over wireless links (Ayyagari: Col. 3, line 49 through Col. 4, line 25). Ayyagari discloses **a wireless Local Area Network (LAN) for routing received information frames, the wireless LAN associated with a wired network having Quality of Service (QoS) levels/service levels** (Ayyagari: Figure 1 and Col. 7, lines 13-19; describing types of wired communication mediums. With description to Figure 1 and in accordance with a LAN and associated wireless LAN, see 171 and 198. Also, Col. 8, lines 19-37 describes LAN, wide-area networks (WAN), personal-area networks (PAN), and other networks that include communication protocols Bluetooth^{tm}, UPnP^{tm}, and JINT^{tm}. In Figure 2 and corresponding description in Col. 9, line 17 through Col. 10, line 11 for access point transmitting between wireless devices 210, 215, and 220 with wired router, 235.), **wherein the wired network having different paths for carrying information frames received from at least one mobile terminal user** (Ayyagari: Figure 2 and corresponding description in Col. 9, line 17 through Col. 10, line 11; mobile devices 210, 215, and 220 are routed from access point, 200 to router, 235, and then further routed to servers, databases, or receiving node.), **the wireless LAN comprising:**

at least one Access Point for receiving radio traffic from at least one mobile

terminal and for communicating such traffic in the form of at least one information frame (Ayyagari: Figure 2 and accompanying description in Col. 9, line 17 through Col. 10, line 11; access point 200, receives requests in the form of messages for access to a network with a particular QoS included in the message.):

an administrative gateway for establishing a Quality of Service level/service level for the at least one information frame and for instructing the Access Point to assign an identifier (Ayyagari: Col. 11, lines 4-41; the access point may act as a gatekeeper that permits or allows access to a network when there is room in a queue with respect to a particular QoS. Packets are tagged referring to QoS.).

Ayyagari assigns tags for required QoS necessary or sufficient for the intended purpose from a bandwidth-managing module at a starting node along a path between a requesting node and a receiving node (Ayyagari: Col. 11, lines 20-32). Ayyagari does not expressly disclose associating a VLAN tag with a path that has a transmission capability to provide the determined QoS.

In a similar field, particular to Ayyagari with regards to optimum path selection (Ayyagari: Abstract; generally, the path is dictated at each individual node, whether a node can support the resources requested.), Oda discloses a LAN switch that recognizes an optimum path to a VLAN (Oda: [0031-0032]). Oda discloses **assigning an identifier of at least one network path to the at least one information frame that identifies a path through the wired network having transmission capability in accordance with the QoS level/service**

level established for the at least one information frame, wherein the identifier comprises a Virtual Local Area Network (VLAN) number (Oda: [0102-0108]); in a particular embodiment, a path monitor pings paths to determine shortest response time. The VLAN (path) with the shortest response time is determined to be the optimum path (Note: response times are synonymous with a QoS characteristic known as delay.). In [0263], Oda describes how the response time is then associated in "frame information" and then mapped to a VLAN ID to describe the optimum path.) **and a switch for routing the frame along the at least one network path to a destination selected in accordance with the assigned identifier** (Oda: [0267]; the frame is transferred over the optimum VLAN and corresponding VLAN ID.).

Examiner has given the term "transmission capability" its broadest reasonable interpretation read in light of the specification to include any network device with the ability to route a frame of information in accordance with a VLAN identifier. That is to say, if a switch has the "capability" to route frames of data according to a VLAN ID, it has sufficient transmission capability.

Since Ayyagari and Oda are of similar fields (path selection), it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Ayyagari to include the use of VLAN IDs for optimum path selection in the case where are there a plurality of networks. This beneficial to the method in that an optimum path may be assigned dynamically for individual frames if a fault or if a threshold of errors along a path is met or exceeded.

Regarding Claim 9, the combination of Ayyagari and Oda discloses **the wireless LAN according to claim 8**, wherein Oda further discloses the switch comprises a Virtual Local Area Network (VLAN) capable Ethernet switch (Oda: [0005-0028]; routing of Ethernet frames.).

Regarding Claim 10, the combination of Ayyagari and Oda discloses **the wireless LAN according to claim 8, further including a plurality of routing gateways, each comprising a destination for the at least one information frame routed by the switch in accordance with the identifier assigned to the at least one information frame** (Ayyagari: Figure 2; router, 235 has at least two interfaces for routing. Oda: Abstract and [0016]; multiple spanning tree protocol mounted on a plurality of L2 switches with connections to a plurality of VLANs and associated terminals.).

Regarding Claim 11, the combination of Ayyagari and Oda discloses **the wireless LAN according to claim 8 further including a routing gateway, having a plurality of interfaces, each interface providing a path for carrying the at least one information frame routed by the switch in accordance with the identifier assigned to the at least one information frame** (Ayyagari: Figure 2; router, 235 has at least two interfaces for routing. Oda: Abstract and [0016]; multiple spanning tree protocol mounted on a plurality of L2 switches with connections to a plurality of VLANs and associated terminals. (Oda: [0102-0108]); in a particular embodiment, a path monitor pings paths to determine shortest response time. The VLAN (path) with the shortest response time is determined to be the optimum path.).

Regarding Claim 13, the combination of Ayyagari and Oda discloses **the wireless LAN according to claim 8,** wherein Oda further discloses **the VLAN number is the identifier that identifies the path through the wired network having transmission capability in accordance with the QoS level/service level established for the at least one information frame** (Oda: [0102-0108]); in a particular embodiment, a path monitor pings paths to determine shortest response time. The VLAN (path) with the shortest response time is determined to be the optimum path (Note: response times are synonymous with a QoS characteristic known as delay.). In [0263], Oda describes how the response time is then associated in "frame information" and then mapped to a VLAN ID to describe the optimum path.).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN ELLIOTT whose telephone number is (571)270-7163. The examiner can normally be reached on Monday thru Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2474

BENJAMIN ELLIOTT
Examiner
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